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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

YIMAM, HARUN M

ART UNIT PAPER NUMBER

2611

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 09/825,820 | Applicant(s) HORVITZ ET AL. | |
| | Examiner Harun M. Yimam | Art Unit 2611 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06/13/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-18 and 32-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-18 and 32-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>see Office Action</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 06/25/2005 has been considered by the examiner.

Response to Arguments

2. Applicant's arguments filed 06/13/2005 have been fully considered but they are not persuasive.
3. In response to applicant's argument that Maissel does not anticipate or suggest that a collaborative filtering system generates a recommendation specific to the user based on information obtained from a plurality of users, the Examiner cites column 19, lines 27-46 and column 12, lines 23-34 to support the claimed limitations, i.e., "a collaborative filtering system that employs the logged temporal history and disparate logged temporal history from a plurality of disparate database systems to generate a recommendation specific to the user based at least in part on information obtained from a plurality of users related to a particular one of the plurality of time subintervals".
4. In response to applicant's argument that Maissel does not anticipate or suggest generating a recommendation based on one time subinterval out of a plurality of time subintervals, the Examiner cites column 12, lines 23-34, in which Maissel discloses that

the viewer preference profile can include information obtained over **a period of time** and that **any length of time can be used** (column 12, lines 23-34). Maissel explicitly discloses that the period of time may be as short as a few minutes or as long as a year or more.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 4, 9-18, and 32-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Maissel (US 6,637,029).

Considering claim 1, Maissel discloses a system for ranking items in a selectable information list (column 20, lines 47-56) received from an information delivery system (column 7, lines 55-61 and column 10, lines 59-62), comprising; a database system (140 in figure 1, column 12, lines 23-26, and column 18, lines 4-21) that logs (records) selections of information viewed by a user of the information delivery system (column 14, line 67 - column 15, line 4) and logs temporal history related to a plurality of time

subintervals that correspond to the viewing of the selected information (column 12, lines 26-28 and 40-45); and a collaborative filtering system (130—figure 1) that employs the logged temporal history and disparate logged temporal history from a plurality of disparate database systems to generate a recommendation specific to the user based at least in part on information obtained from a plurality of users (column 19, lines 27-46) related to a particular one of the plurality of time subintervals (column 12, lines 23-34).

As for claim 2, Maissel discloses that a selection is logged if the selection is viewed for a dwell time that exceeds a predetermined threshold (column 4, lines 29-37).

Regarding claim 4, Maissel discloses that a selection is logged if the selection is briefly viewed and jumped away to another selection (column 4, lines 38-43).

Regarding claim 9, Maissel discloses that the collaborative filtering system provides in real-time a selectable recommendation list ordered by estimated degree of preference that a user has for each item (column 19, lines 27-46). Maissel discloses that real time information may be transmitted and displayed on a user's display apparatus (column 19, lines 27-30) as a recommendation bar graph that shows estimated degree of preference indicating the proportion of audience watching the same or another program (column 19, lines 39-43).

Considering claim 10, Maissel discloses that the collaborative filtering system receives attributes of at least one user of the system and utilizes these attributes in providing the selectable recommendation list (column 15, line 63 – column 16, line 4).

As for claim 11, Maissel discloses that the collaborative filtering system receives attributes of other systems (column 11, lines 56-64) and utilizes these attributes in providing a globally ranked recommendation list (**satellite** communication between a headend and a STB at a user anywhere: global—column 18, lines 51-54 and column 15, line 63 – column 16, line 4) to a cluster of systems based on the temporal viewing history of the systems of the cluster (column 12, lines 31-45).

With regards to claim 12, Maissel discloses that the collaborative filtering system—130 receives a previously viewed item list that has been filtered by a filtering system—120 (column 11, lines 51-59) and generates a new recommendation according to the preferences provided by the filtered previously viewed item list (the collaborative filtering system produces a customized program schedule information based on the viewer preference profile, which is determined based on previously viewed programs—column 6, lines 60-67 and column 8, lines 55-57).

Regarding claim 13, Maissel discloses the filtering system comprising a time period filter (column 14, lines 20-23 and 30-33) and a popularity filter (column 14, lines 38-46).

Considering claim 14, Maissel discloses a user interface (column 12, lines 46-50) that allows a user to provide at least one filter to a reviewed items list.

As for claim 15, Maissel discloses that the user interface allows a user to request a time period for reviewing information from the selectable recommendation list wherein the collaborative filtering system supplies the selections for the time period requested based on the temporal history of selections within a similar time interval covering the time period. Maissel discloses that the user is enabled to add, delete, or modify any information in the viewer's viewer preference profile (which comprises information on the amount of time or proportion of duration of the program: time period—column 12, lines 31-34) and perform any other appropriate action using the user interface (column 12, lines 48-52 and column 13, line 8).

With regards to claim 16, Maissel discloses that the user interface receives a reviewed items list, allows a user to modify the reviewed items list (column 12, lines 48-57), and inputs the modified reviewed items list as updated preferences into the collaborative filtering system (column 13, lines 5-7), such that a new recommendation list can be generated based on the updated preferences.

Regarding claim 17, Maissel discloses that the information is multimedia (column 21, lines 37-41).

Considering claim 18, Maissel discloses a multimedia system (column 21, lines 37-41) for ranking programs in an EPG list received from a program delivery system (column 7, lines 55-61), comprising; a database system (140—figure 1, column 12, lines 23-26, and column 18, lines 4-21) that logs (records) selections of programs viewed by a user utilizing a program delivery system (column 14, lines 54-62) and logs temporal history that includes a plurality of time subintervals that correspond to the viewing of the selected programs (column 12, lines 26-28 and 40-45); and a collaborative filtering system (130—figure 1) that employs the logged temporal history from the database system and different logged temporal history from a plurality of database systems associated with disparate users to produce a user specific recommendation based at least in part on information associated with a plurality of users (column 19, lines 27-46) related to a particular one of the plurality of time subintervals (column 12, lines 23-34).

As for claim 32, Maissel discloses the multimedia system residing on a remote server (headend) coupled to at least one set top box (110 in figure 1 and column 10, lines 23-26) wherein recommendations are generated by the server and transmitted to the set top box (column 3, lines 36-53 and column 7, line 62 - column 8, line 7).

With regards to claim 33, Maissel discloses the set top box (STB) having an electronic program guide system (column 10, lines 14-24) that receives and displays (column 10, lines 31-37) the recommendations to a user (360—figure 8A receives one

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or more viewer preference profiles and creates a customized program information (recommendation list) that will be delivered to the STB and displayed thru an EPG—column 18, lines 58-67).

Regarding claim 34, Maissel discloses the remote server (headend 340 in figure 8A) further comprising a global inference system (**satellite** communication between headend 340 and STB 110 at a user anywhere: global—column 18, lines 51-54 and 360—figure 8A) that groups multimedia systems into clusters and a set of general recommendations for members (column 18, lines 60-64) of at least one cluster based on the temporal viewing habits of members of the clusters column 19, lines 6-15).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maissel (US 6,637,029) and Ferman (US 2002/0059584).

With regards to claim 3, Maissel discloses a collaborative filtering system (130—figure 1) that employs a logged temporal history corresponding to the viewing of the

selected information from a plurality of systems (viewing information from plural viewers—column 11, lines 48-64). Maissel fails to disclose that the collaborative filtering system assigns a positive vote to logged selections that are viewed for a dwell time that exceeds a predetermined threshold.

In analogous art, Ferman discloses that a collaborative filtering system assigns a positive vote to logged selections that are viewed for a dwell time that exceeds a predetermined threshold (paragraph 0285, lines 1-8 and paragraph 0307, lines 1-6).

It would have been obvious to one of ordinary skill in the art to modify Maissel's system to include a positive vote being assigned to the logged selections that are viewed for a dwell time that exceeds a predetermined threshold, as taught by Ferman, for the benefit of increasing the likelihood of positive preferences of a particular user being selected by the system (paragraph 0285, lines 4-8).

Considering claim 5, Maissel discloses a collaborative filtering system that employs a logged temporal history corresponding to the viewing of the selected information from a plurality of systems (viewing information from plural viewers—column 11, lines 48-64). Maissel fails to disclose that the collaborative filtering system assigns a negative vote to logged selections that are viewed briefly and jumped away to another selection.

In an analogous art, Ferman discloses that the collaborative filtering system assigns a negative vote (paragraph 0307, lines 1-6) to logged selections that are viewed briefly and jumped away to another selection.

It would have been obvious to one of ordinary skill in the art to modify Maissel's system to include a negative vote being assigned to the logged selections that are viewed briefly and jumped away to another selection, as taught by Ferman, for the benefit of lowering the likelihood of negative preferences of a particular user being selected by the system (paragraph 0285, lines 4-6).

9. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maissel (US 6,637,029) and Hopple (US 6,519,769).

As for claim 6, Maissel discloses that the viewed information is time stamped (column 17, lines 42-44) by event type and the collaborative filtering system is based on a single collaborative filtering model. Maissel fails to disclose that the collaborative filtering model is adapted to be trained according to time intervals that the information has been viewed.

In analogous art, Hopple discloses a collaborative filtering model that is adapted to be trained according to time intervals that information has been viewed (column 5, lines 2-9 and 33-41).

It would have been obvious to one of ordinary skill in the art to modify Maissel's system to include a collaborative filtering system that is adapted to be trained, as taught by Hopple, for the benefit of accurately generating a preferred channel match condition (column 5, lines 40-41).

With regards to claim 7, Maissel discloses that the collaborative filtering system—130 is based on a plurality of separate collaborative filtering **models** (parental control information, subscription information, rating information, and language choice information—column 14, lines 20-53). As for the training feature, it is met by Hopple as described in the rejection of claim 6 above.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harun M. Yimam whose telephone number is 571-272-7260. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HMY


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PRIMARY EXAMINER